

with the air inside the room; and

a means for balancing respective flows of air through the first and second channels to maximize heat exchange therebetween, wherein the means for balancing comprises:

a ventilator arranged in a first channel;

a ventilator arranged in a second channel;

at least four temperature sensors arranged in the outlets and inlets of the first and second channels; and

a controller for comparing the readings of the temperature sensors and for controlling the ventilators in the first and second channels, such that the temperature difference between the inlet and outlet of the first channel is approximately equal to the temperature difference between the inlet and outlet of the second channel.

Claim 28 (canceled).

(13)

Claim 29 (currently amended):

A ventilation system for mounting in a wall of a room, the wall having a thickness, and the ventilation system being configured to communicate air inside the room with air outside the wall, comprising:

a fine wire heat exchanger, configured with a cross-sectional thickness that is approximately equal to the wall thickness, and formed with first and second channels in heat-exchanging contact, the channels being defined with respective inlets and outlets, and wherein the first channel inlet and the second channel outlet are in fluid communication with the outside air, and wherein the first channel outlet and the second channel inlet are in fluid communication with the air inside the room; and

a means for balancing respective flows of air through the first and second channels to maximize heat exchange therebetween~~The ventilation system according to claim 27,~~ wherein the means for balancing comprises:

a first double-acting cylinder incorporating a first piston defining first and second chambers;

a second double-acting cylinder including a second piston connected to the first piston and defining third and fourth chambers;

whereby displacement of the pistons to enlarge the first chamber thereby enlarges the third chamber; and